subsequently compressing said conditioned feed material in a screw press in an environment of saturated steam at a pressure in the range of about 15-25 psi at a compression ratio of at least about 4:1 to destructure said fibers; [and]

subsequent to the step of compressing, preheating the destructured material in an environment of saturated steam; and

[without an intervening chemical digester, finally] immediately following the step of preheating, refining said material to form lignocellulose pulp.

31. (Amended four times) A method for producing thermo-mechanical pulp in a primary disc refiner from lignocellulose fiber-containing chip feed material comprising the steps of:

first conditioning said fiber-containing feed material in an environment of saturated steam at an elevated pressure in the range of about 15-25 [psig] psi to produce a conditioned feed material;

directly thereafter compressing said conditioned feed material in an environment of saturated steam at an elevated pressure in the range of about 15-25 [psig] psi to destructure said fibers without significant breakage across grain boundaries;

pre-heating the destructed material in an environment of saturated steam at a pressure higher than the pressure of the environment at which the material was destructured; and

conveying the pre-heated material to the inlet of a primary disc refiner operating at a higher pressure than the pressure of the environment at which the material was destructured.

36. (Amended four times) A method for producing thermo-mechanical pulp in a primary disc refiner from lignocellulose fiber-containing chip feed material comprising the steps of:

first conditioning said fiber containing feed material while conveyed through a first